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Stating the case: School and post-school outcomes

- 2.1 A wide range of measures of educational performance and outcomes were presented in submissions to show that boys are either disadvantaged or not disadvantaged relative to girls in education. Measures include the results of national testing against early literacy benchmarks, measures of attainment at Years 10 and 12, retention rates and other indicators such as post school employment, income and education outcomes. The complexities inherent in this information are not easily covered in media presentations. As a result the public debate on boys' achievement has focused on the relatively simple measures while the underlying complexities have been overlooked.
- 2.2 This chapter considers a range of outcomes and measures of attainment and what they reveal about the relative achievement of males and females in society, education and employment. The evidence reveals a mixed picture of under-achievement which is influenced by characteristics such as the quality of teaching, curriculum, resources, gender, socio-economic status, racial and ethnic background and location, many of which are inter-related.
- 2.3 Research in the United Kingdom has revealed a widening gap between boys and girls in achievement in secondary education similar to that evident in Australia.¹ The patterns of achievement in literacy for Australian boys and girls are similar to those evident in many other countries with girls outperforming boys. More girls than boys complete school in other OECD countries and women have higher rates of entry to university. Patterns of participation in vocational education are also similar.²

1 DETYA, *Submission No. 117*, p. 27.

2 DETYA, *Submission No. 117*, p. 20.

- 2.4 This chapter provides evidence that many of the old gender divisions in education and employment still exist almost unchanged. This repudiates the suggestion that too much has been done for girls and that now it is the boys' turn. It is more constructive to seek to understand the issues in boys' education as a need to address boys' under-achievement rather than as a need to 'correct' an apparent disadvantage relative to girls. The way forward for both boys and girls is to identify their joint and separate educational needs and to implement a policy framework and strategies to address those needs.

Early literacy

Boys and literacy attainment

- 2.5 It is well understood from the *National School English Literacy Survey (1996)* that, on average, boys do not perform as well as girls in each aspect of literacy — writing, reading, viewing, speaking and listening — and that the gender differences are greatest for the expressive modes of writing and speaking and least for the receptive modes of reading, listening and viewing. The differences between boys and girls are greater for children from lower socio-economic groups.³ Also, boys typically comprise about two-thirds of all students referred to reading recovery programs in Australian schools.⁴
- 2.6 National literacy benchmark data for Years 3 and 5 in 1999 also show that girls consistently outperform boys, but that the levels of attainment and the gender gap in different States and Territories are not uniform. There are also likely to be social, biological or developmental reasons why boys' levels of attainment are lower than girls. A comparison of the State and Territory Year 3 and Year 5 reading benchmark results for 1999 and 2000 demonstrates that it is possible to raise the overall achievement of both boys and girls while reducing the achievement gap between them.⁵ (Year 3 and Year 5 reading benchmark data are included at Appendix E.)

3 DETYA, *Submission No. 117*, pp. 5-6.

4 *For example see* Mr J. Coleborne, Executive Director, School Education Division, ACT Department of Education and Community Services, *Transcript of Evidence*, p.1324; Professor P. Hill, Deputy Dean, Centre for Applied Educational Research, University of Melbourne, *Transcript of Evidence*, p. 519; Ms M. O'Halloran, Senior Vice-President, New South Wales Teachers Federation, *Transcript of Evidence*, p. 366.

5 DEST, *Submission No. 117.2*, pp. 14-17.

- 2.7 Another study, conducted by the Australian Council for Educational Research (ACER), confirmed the gender difference in literacy attainment at 14 years of age and also found that the difference between the percentages of boys and girls who achieved mastery in reading comprehension had increased from 3 percentage points to 8 percentage points over the period 1975 to 1995.⁶
- 2.8 Within each socio-economic group, boys achieve at a lower level than girls and the difference is larger for lower socio-economic groups.⁷ Other factors besides socio-economic status and gender which affect early literacy attainment include aboriginality, geographic location and whether a student is from a non-English speaking background.⁸ Some of these factors exert a greater influence than gender on the acquisition of literacy skills and some appear to compound the effect of gender.
- 2.9 Clear differences in the levels of literacy attainment between boys and girls emerge in early primary school. The differences persist into high school and are likely to be compounded by other factors. Literacy issues are covered more comprehensively in Chapter 5.

School retention and early leaving

The importance of school completion

- 2.10 Early school leaving is a matter of great concern because young people who have not completed Year 12 have much greater difficulty making a successful transition from school to post-school education and training, and employment. This is highlighted by the differential in unemployment rates for young people with differing levels of educational attainment.
- 2.11 In May 2000, the unemployment rate for young people 20 to 24 years of age who did not complete Year 12 was 18.5 per cent, compared with 8.2 per cent for those who had completed school, 7 per cent for those with skilled vocational qualifications and 3.8 per cent for those with university degrees. The returns to education in the labour market are sustained

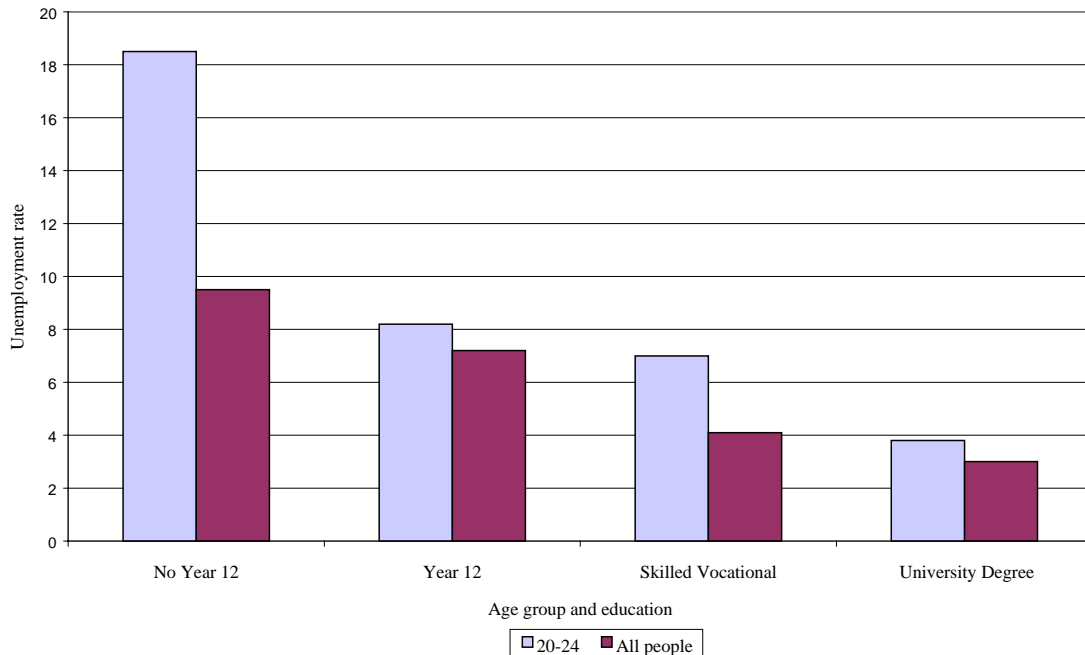
6 Marks, G. N. and Ainley, J., *Reading Comprehension and Numeracy among Junior Secondary School Students in Australia*, LSAY Research Report No. 3, ACER, March 1997, p. 6, and see DETYA, *Submission No. 117*, p. 7.

7 DETYA, *Submission No. 117*, p. 8.

8 DETYA, *Submission No. 117*, p. 8 and NSW Department of Education and Training *Submission No. 164*, p. 12.

throughout life. In May 2000, the unemployment rate for all people who did not complete Year 12 was 9.5 per cent compared to 7.2 per cent for those who had completed school, 4.1 per cent for those with skilled vocational qualifications and 3 per cent for those with higher education qualifications⁹ (See Figure 2.1 below).

Figure 2.1 Unemployment by Educational Attainment



Source ABS, *Transition from School to Work*, (Cat. no. 6227.0), May 2000.

2.12 The costs of early school leaving are substantial. The National Centre for Social and Economic Modelling has estimated that the lifetime cost to the country of each early school leaver is \$74,000. Half of this amount is a direct monetary cost borne by the individual (\$14,700) and government (\$22,400) and the remaining half is a social cost borne by the individual, government and the community.¹⁰

2.13 Labour market changes, which will be covered more comprehensively in Chapter 3, have increased the competition that early school leavers face for a declining number of low and unskilled jobs.

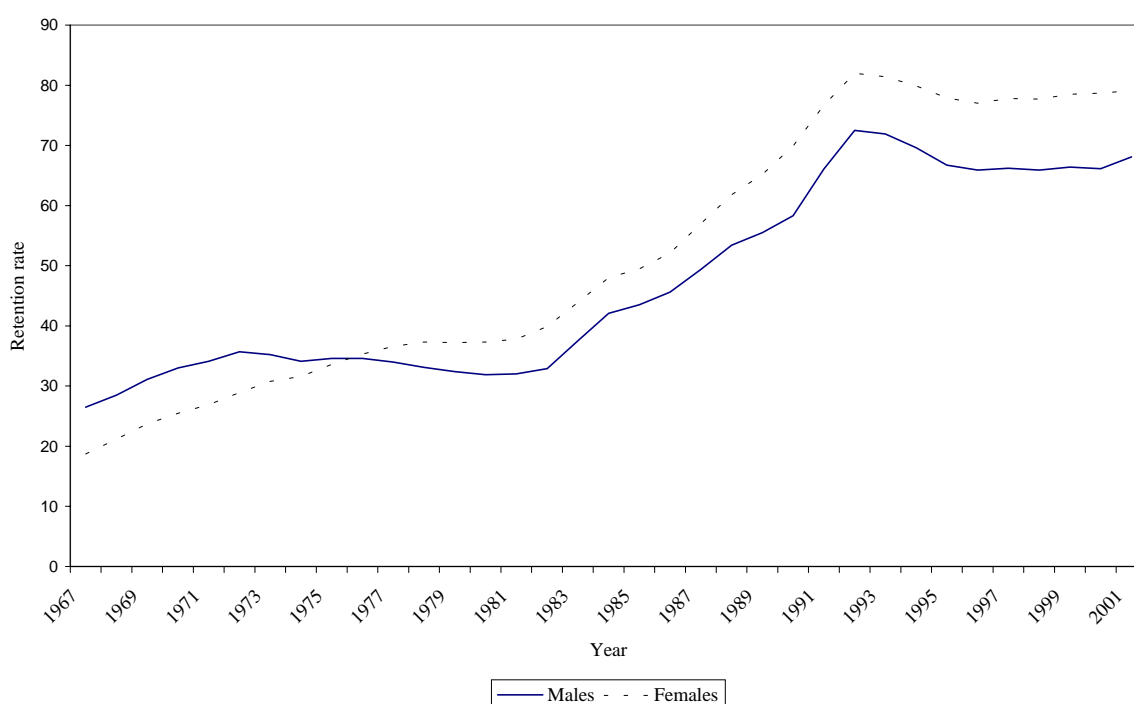
9 Derived from ABS, *Transition from School to Work*, (Cat. no. 6227.0), May 2000.

10 National Centre for Social and Economic Modelling, *The Cost to Australia of Early School-Leaving*, Dusseldorp Skills Forum, October 1999, p. 1.

Year 12 apparent retention rates¹¹

- 2.14 In 2000, the gender gap in school retention was 12.6 percentage points, the widest gap ever. It fell to 11 percentage points in 2001 but this is still very wide by historical standards (*see Figure 2.2 below*). The national school retention rate rose strongly throughout the 1980s peaking at 77.1 per cent in 1992. It subsequently declined to 71.3 per cent in 1996 and plateaued just above that level at 72.3 per cent in both 1999 and 2000.¹²
- 2.15 The rise and decline has not been uniform for males and females. Since 1976, when the retention rate for females first exceeded the rate for males, the gender gap in school retention widened to 11.6 percentage points in 1990. The gender gap narrowed to 9.5 percentage points in 1992 and 1993 as retention rates for males and females peaked. The subsequent decline was greater for males until the rate turned upwards in 2000. The female retention rate plateaued several years earlier and began rising. Both male and female retention rates now appear to be trending upwards.

Figure 2.2 National Year 12 Apparent Retention Rates by Gender



Source DEET (1993), *Retention & participation in Australian schools, 1967 to 1992*; DEET (1994), *Retention & participation in Australian schools, 1993*; ABS, *Schools Australia, (Cat. no. 4221.0) 1994 onwards*.

- 11 The Year 12 Apparent Retention Rate is the percentage of students of a given cohort who continue to Year 12. A range of factors such as inter-state and inter-sector student transfers and repeating students are not taken into account hence the qualification “apparent”.
- 12 DEET (1993), *Retention & participation in Australian schools, 1967 to 1992*; DEET (1994), *Retention & participation in Australian schools, 1993*; ABS, *Schools Australia, (Cat. no. 4221.0) 1994 onwards*.

Table 2.1 Year 12 Retention Rates by State and Gender, 2000

Sector	NSW		VIC		Qld		SA	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Government	54.7	67.4	62.2	80.7	66.7	78	50.3	62.5
Non-Government	76.7	86.6	81.2	94.2	83.6	91.5	79.3	90.6
All Schools	61.7	73.5	69.2	85.8	72.4	82.6	59.2	71.8

Table 2.1 Year 12 Retention Rates by State and Gender, 2000 — *continued*

Sector	WA		Tas		NT		ACT	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Government	60.2	72.4	62.2	77.9	50	68.2	100.1	109.7
Non-Government	77	88.3	65.2	72.5	27.2	35.2	64.1	60.8
All Schools	65.5	77.6	63	76.4	42.5	57	84.9	89.3

Source ABS, National Schools Statistics Collection.

2.16 The timing and magnitude of the national trends in school retention rates for males and females vary for each state and school sector. However, the trends in each state and in each school sector are broadly consistent — female retention rates overtook male retention rates some years ago and the gaps between the male and female retention rates are now relatively wide¹³ (see Table 2.1, above).

Factors linked to early school leaving

2.17 As with the acquisition of literacy skills, factors such as the quality of teaching, curriculum, resources, socio-economic status, geographic locality, ethnicity and aboriginality, in addition to gender have been linked with early school leaving. Research by the Australian Council for Educational Research has also linked other factors such as early school achievement, attitudes to school, school type, parental education levels, and parents' country of birth to early school leaving.¹⁴ An ACER research report concluded that at the same levels of school achievement and with social background and demographic factors equal, boys are substantially more likely than girls to leave school early and "the gender difference is

13 DEET (1993), *Retention & participation in Australian schools, 1967 to 1992*; DEET (1994), *Retention & participation in Australian schools, 1993*; ABS, *Schools Australia*, (Cat. no. 4221.0) 1994 onwards.

14 DETYA, *Submission No. 117*, p. 11, and see Marks, G. N. and Fleming, N., *Early School Leaving in Australia: Findings from the 1995 Year 9 LSAY Cohort*, LSAY Research Report No. 11, ACER, August 1999; Lamb, S., *School Achievement and Initial Education and Labour Market Outcomes*, LSAY Research Report No. 4, ACER, July 1997; and Lamb, S., Dwyer, P. and Wyn, J., *Non-completion of School in Australia: The Changing Patterns of Participation and Outcomes*, LSAY Research Report No. 16, ACER, September 2000.

large in comparison with other effects”.¹⁵ It also found that the gender effect declines somewhat as attitudes and aspirations are introduced into the analysis.

Therefore, differences between males and females in attitudes to school and aspirations account for some of the gender difference in early school leaving.¹⁶

- 2.18 The link between attitudes and gender in the ACER research resonates with the findings of Slade and Trent, who reported that boys often find school a hostile, irrelevant and boring imposition that interferes with their lives outside school.¹⁷ It appears that boys are more likely than girls to act on a negative attitude towards school and leave.
- 2.19 In the ACER study, school achievement, as measured by literacy and numeracy achievement at age 14, was also found to have a substantial effect on early school leaving which was larger than other individual-level background and school factors such as socio-economic status, geographic location and school type. The influence of school achievement also operates on early school leaving through the effect it has on students’ satisfaction with school (especially among boys) and attitudes to achievement (especially among girls).¹⁸
- 2.20 Parental education levels and parental country of birth also have an influence on school completion. Higher parental education levels are associated with a higher likelihood of school completion for both males and females although the association has weakened over the last 20 years.¹⁹ Students of non-English speaking backgrounds are more likely to complete school than students from English speaking backgrounds and this remains true when other socio-economic and school factors are constant. However, there is a strong gender difference, with the effect for non-English speaking girls being stronger than for non-English speaking

15 Marks, G. N. and Fleming, N., *Early School Leaving in Australia: Findings from the 1995 Year 9 LSAY Cohort*, LSAY Research Report No. 11, ACER, August 1999, p. 16.

16 Marks, G. N. and Fleming, N., *Early School Leaving in Australia: Findings from the 1995 Year 9 LSAY Cohort*, LSAY Research Report No. 11, ACER, August 1999, p. 16.

17 Slade, M. and Trent, F., What the boys are saying: An examination of the views of boys about declining rates of achievement and retention, *International Education Journal Vol. 1, No. 3, 2000*, and see *Transcript of Evidence*, pp. 874-888.

18 Marks, G. N. and Fleming, N., *Early School Leaving in Australia: Findings from the 1995 Year 9 LSAY Cohort*, LSAY Research Report No. 11, ACER, August 1999, p. 21.

19 Marks, G. N. and Fleming, N., *Early School Leaving in Australia: Findings from the 1995 Year 9 LSAY Cohort*, LSAY Research Report No. 11, ACER, August 1999, p. 18 and see Lamb, S., Dwyer, P. and Wyn, J., *Non-completion of School in Australia: The Changing Patterns of Participation and Outcomes*, LSAY Research Report No. 16, ACER, September 2000, p. 25.

boys. The higher propensity for boys from non-English speaking backgrounds to complete school compared to other boys is explained almost entirely by their more positive attitudes to school.²⁰

- 2.21 Aboriginal and Torres Strait Islander students are much more likely to leave school early with ACER research indicating that Aboriginal boys are slightly more likely to leave early compared to Aboriginal girls. For Aboriginal boys, ACER concluded “that their increased propensity to leave school early can be largely attributed to their social backgrounds and school achievement” but the study was unable to offer explanations as to why Aboriginal girls were more likely than other girls to leave school early.²¹ A Northern Territory study of Jabiru Area School found much wider differences in Aboriginal male and female enrolment rates at 45.4 and 61.9 per cent of the total possible enrolment respectively. Large differences in tertiary enrolments by Aboriginal men and women and awards to Aboriginal boys and girls of the South Australian Certificate of Education (NT) also imply a much wider differential in Aboriginal male and female participation and school completion rates than that suggested by the ACER study.²²
- 2.22 ACER research confirms the expectation that the rapid rise in school retention from the early 1980s to the mid 1990s has broadened the social composition of school completers significantly. For example, recent populations of school completers now include higher proportions of students from government schools, from lower socio-economic backgrounds and from families with lower levels of educational achievement.²³
- 2.23 However, the effect on the composition of the (now smaller) pool of non-completers has been to increase slightly the proportions of non-completers who are: boys from low socio-economic backgrounds; boys and girls from rural areas; and boys and girls whose parents were born in Australia. Boys now comprise a much higher proportion of school non-completers than they did 20 years ago. In the early 1980s boys comprised 56 per cent of non-completers and by the mid 1990s they comprised 64 per cent.²⁴

20 Marks, G. N. and Fleming, N., *Early School Leaving in Australia: Findings from the 1995 Year 9 LSAY Cohort*, LSAY Research Report No. 11, ACER, August 1999, p. 18.

21 Marks, G. N. and Fleming, N., *Early School Leaving in Australia: Findings from the 1995 Year 9 LSAY Cohort*, LSAY Research Report No. 11, ACER, August 1999, p. 19.

22 Northern Territory Aboriginal Male Health Reference Committee, *Submission No. 190*, p. 1.

23 Lamb, S., Dwyer, P. and Wyn, J., *Non-completion of School in Australia: The Changing Patterns of Participation and Outcomes*, LSAY Research Report No. 16, ACER, September 2000, pp. 18 & 20.

24 Lamb, S., Dwyer, P. and Wyn, J., *Non-completion of School in Australia: The Changing Patterns of Participation and Outcomes*, LSAY Research Report No. 16, ACER, September 2000, pp. 21-23.

2.24 The rising retention rate over the last twenty years has been only one of several factors, but a major factor, driving changes in curriculum and pedagogy, as schools and entire education systems have struggled to meet the needs of students. The social composition of the student body in senior schooling has changed enormously and those students face a radically different labour market, which has different expectations of them, than the labour market of 20 years ago. This is forcing an examination of policy and practice at all levels in education from the early years onwards.

The fact that we have many more young people participating in senior secondary has brought some of the issues to the fore and made us go back and find and dig and discover the issues that have been there inherent in the early years and primary years for a long time. I would not necessarily say that these trends were not there in the early years 20 years ago. It is that we have become more alert to the fact that they are in our face in senior secondary.²⁵

2.25 While school retention rates for boys and girls have risen strongly over recent decades a significant proportion of young people, nearly two thirds of whom are boys, still fail to complete school. Literacy and numeracy achievement have a strong influence on school completion as do attitudes towards school and aspirations. Attitudes towards school seem to be a particular influence on boys' decisions to leave school.

2.26 Attitudes towards school and aspirations are influenced by school achievement and by a range of social and family factors. This suggests that governments should direct attempts to lift school participation for boys and girls by lifting the levels of literacy and numeracy achievement for the lowest achievers, encouraging parents and students to develop higher aspirations and more positive attitudes towards school and education, and by modifying the school environment to make it a more acceptable experience.

25 Ms Jennifer Stehn, Executive Director, Curriculum, South Australian Department of Education, Training and Employment, *Transcript of Evidence*, p. 827.

Suspension from school and truancy

Suspension

- 2.27 Approximately 80 per cent of the students suspended or excluded from school are boys, a rate consistent in each state that provided data.²⁶ Two States provided some detailed data to the Committee. In South Australia during Term 3, 1999, 2,374 boys and 651 girls were suspended. In Western Australia during 2000, 7,402 boys and 1,956 girls were suspended.²⁷ Of the students suspended, males are more likely than females to have been suspended for violence.²⁸ If these figures are typical of other states, the national figures are quite alarming.
- 2.28 Suspension rates rise rapidly from Year 8, peaking in Year 9 and dropping significantly after Year 10.²⁹ Rates of suspension seem to be highest for the groups of students who are the most marginally engaged in schooling.³⁰
- 2.29 Suspensions and expulsions appear to be closely correlated to boys' disengagement from school. The connection between school engagement and the behaviours that lead to detention or suspension is illustrated by the observation of a South Australian school principal.

...once you get to Year 9 the figures explode. The difference is just astronomical between boys and girls. The interesting bit though is that there is not an arithmetic relationship between the compulsory areas of schooling, the compulsory subjects and the subjects that the kids have chosen. Boys get sent out of class far more often than girls at Year 9, but they get sent out radically less proportionately from the subjects that they have chosen than from the subjects that they just have to do.³¹

26 see South Australian Department of Education, Training and Employment, *Submission No. 154*, p. 4; Education Queensland, *Submission No. 168*, p. 2; Tasmanian Department of Education, *Transcript of Evidence*, p. 1106; Western Australian Department of Education, *Exhibit No. 126*.

27 South Australian Department of Education, Training and Employment, 'Audit of Suspensions, Exclusions and Expulsions, Term 3, 1999', *Exhibit No. 49*, p. 3; Western Australian Department of Education, *Exhibit No. 126*.

28 DETYA, *Submission No. 117*, p. 14.

29 see Western Australian Department of Education, *Exhibit No. 126*.

30 DETYA, *Submission No. 117*, p. 14.

31 Mr Anthony Kirkman, Manager Middle School, Hallett Cove School, Department of Education, Training and Employment, *Transcript of Evidence*, p. 825.

Truancy — dropping out

- 2.30 Data on school enrolments by gender suggest that some children drop out of school permanently at a very early age, with proportionately more boys leaving as early as Year 8.

In Year 7, the ratio of males to females is virtually the same as in primary school. In Year 8, however, there is a gain in the percentage of females, suggesting that more males drop out very early. In Year 9, more females than males appear to drop out. Thereafter, in Years 10, 11 and 12 attrition is greater for males than females in expanding ratios each year.³²

- 2.31 That young people are dropping out of school as early as Year 8 was supported by the observations of training providers.

We have a fairly close relationship with Centrelink. The figures they have are that between 500 and 600 people under the age of 30 years of age have year 8 or less... The other area of concern is that we know from statistics and our own research within the region that between 150 and 200 young people every year fall out of the Murrumba Downs region in terms of education. Whether they are expelled, do not go to school, truant regularly or are not achieving is not the question; the question is that the numbers are there.³³

- 2.32 The Committee's predecessor in the 37th Parliament, the House of Representatives Standing Committee on Employment, Education and Training, undertook an inquiry into truancy and exclusion from school. In its report presented in 1996, that Committee lamented the inadequacy of the data available on truancy, school exclusion and 'informal suspensions' and expressed its concern that 'the dimension of the problem of school non-attendance amongst children and young people is unknown.'³⁴ While a number of jurisdictions provided the Committee with current data on school suspensions, the historical data necessary to determine whether rates of truancy or exclusion from school have improved or worsened are unavailable.

32 Collins, C., Kenway, J., and McLeod, J., *Factors Influencing the Educational Performance of Males and Females in School and their Initial Destinations after Leaving School*, July 2000, p. 30; based on ABS, *Schools Australia*, 1998.

33 Mr Dallas Morgan-Williams, Manager MW Training Consultants, *Transcript of Evidence*, p. 586, and see p. 588.

34 House of Representatives Standing Committee on Employment, Education and Training, *Truancy and Exclusion from School*, 1996, p. 13.

- 2.33 The Committee is also concerned that the aggregate enrolment data indicates that some young people appear to be leaving school before the minimum leaving age. In some jurisdictions there is no system to track the school attendance of students in transition from primary to high school or who may leave one school and not re-enrol at another, especially from one school year to the next.³⁵ The potential for this problem to involve more than one jurisdiction as people move interstate suggests that the issue of tracking school attendance should be considered by the Ministerial Council on Employment, Education, Training and Youth Affairs (MCEETYA).

Year 12 performance

Year 12 performance and the boys' education debate

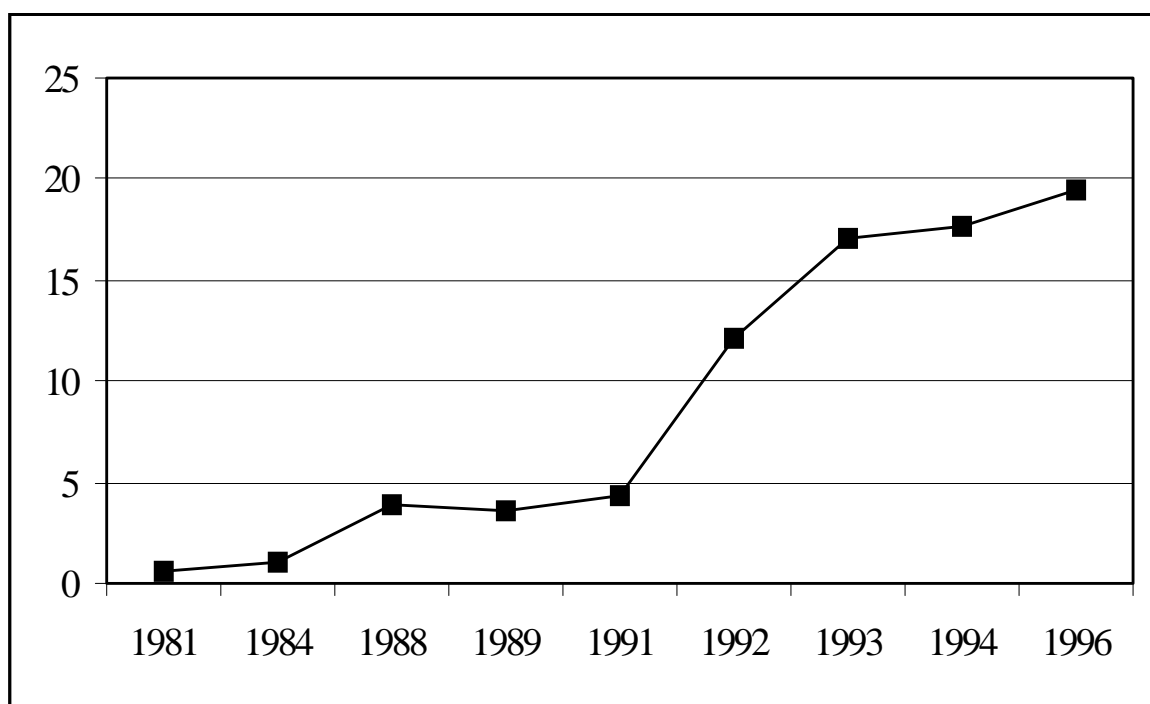
- 2.34 The apparent decline in boys' relative performance requires investigation and explanation, especially as the gender gap in achievement appears to have widened dramatically in the last ten years. The relative achievement of boys and girls in Year 12 assessments features prominently in the popular debate. Concern in the 1970s and 1980s about the low participation rates of girls in higher maths and science has given way to widespread concern about the decline in boys' achievement relative to girls as measured by average tertiary entrance scores and similar general measures of achievement. However, it is important to remember that while improvements in educational outcomes for some groups of girls are real they have eluded many other girls.
- 2.35 The popular debate belies the underlying complexity of what is happening and overlooks the fact that boys and girls have dramatically divergent patterns of enrolment in different subjects in senior school. In upper secondary school, there are many reasons why boys and girls choose particular subjects. This makes it extremely difficult to make sound comparisons between the performance of boys and girls, who have enrolled in subjects in unequal numbers, and to draw reliable conclusions about the different levels of achievement that boys and girls attain.

35 see *Transcript of Evidence*, pp. 638-639.

Average levels of achievement at Year 12

2.36 Recent research indicates that the pattern of gender performance is similar throughout Australia and that the gap between girls and boys appears to have widened between 1994 and 2000.³⁶ For example, aggregate results at Year 12 level show that in the 1999 NSW Higher School Certificate, for subjects studied by more than 100 students, the girls' average mark was higher than the boys' in 36 of the 40 subjects by up to 11 per cent. In 1998 in Queensland there was a greater proportion of girls in the top performance bands in 36 of 45 Year 12 subjects and in 1998 in South Australia there was a higher proportion of girls in the top performance bands in 27 of 34 subjects in Year 12.³⁷

Figure 2.3 Marks by which Female Average TES exceeded Male Average TES 1981 -1996 (NSW)



Source MacCann R., ABS, as produced by Buckingham, J., Submission No. 26, p. 3.

2.37 The situation in NSW is a dramatic example. The difference between boys' and girls' average NSW Tertiary Entrance Score (TES) results has widened from 0.6 marks in 1981 to 19.4 marks in 1996, with the difference increasing rapidly in the early 1990s. While changes to assessment practices³⁸ have been suggested as a possible explanation for the rapid

36 Department of Education, Science and Training, *Submission No. 117.2*, p. 8.

37 Ms Jennifer Buckingham, *Submission No. 26*, p. 2.

38 Mr Robert Horne, Department of Education, Training and Youth Affairs, *Transcript of Evidence*, p. 7.

divergence in the early 1990s no definitive explanation has been offered. However, it does need to be clearly understood that the TES is a ranking instrument, not an absolute measure of educational attainment (see Figure 2.3 above).

- 2.38 One of the difficulties with these general measures of achievement is that the cohort of young people completing Year 12 in the late 1990s or the early 2000s is much more broadly representative than the cohort which completed Year 12 in 1981. The Year 12 cohorts from 20 years apart are not directly comparable because the Year 12 retention rates for boys and girls in 1981 were 32 per cent and 37.8 per cent respectively and by 2000 these rates had increased to 66.1 per cent and 78.7 per cent.³⁹ Perhaps the more recent cohorts of boys in senior school are not being catered for as well as the more recent cohorts of girls.

Twenty years ago, the majority of boys would leave at a particular age because there was manual, industrial age type of technology that they could be involved in... Now... you do not have those manual jobs... The other thing you have is very much a multicultural society which was not there 20 years ago, and a lot of the parents do not understand the system that they have brought their children to. They want to see their boy get a bit of paper, and that bit of paper has to be a Higher School Certificate. It does not matter that they are not able to do the things... So there is this differential... because the boys we are seeing in year 12 now we would not have seen in year 12 twenty years ago.⁴⁰

- 2.39 Research by the ACER suggests that various factors have a different influence on boys' and girls' decisions to complete school⁴¹ and that this affects the relative social composition of the boys and girls who leave school early⁴² and, by implication, of those who complete school. Put more clearly, the 'matching' cohorts of boys and girls in the same senior year do not have identical characteristics. Similarly, cohorts of boys or girls in Year 12 from recent years do not share identical characteristics with earlier groups and extreme care must be taken when making comparisons.

39 DEET (1993), *Retention & participation in Australian schools, 1967 to 1992*; ABS, *Schools Australia*, (Cat. no. 4221.0) 1994 onwards.

40 Mr Stephen Billington, Principal, James Cook Boys Technology High School, *Transcript of Evidence*, p. 715.

41 Lamb, S., *School Achievement and Initial Education and Labour Market Outcomes*, LSAY Research Report No. 4, ACER, July 1997, pp. 3-8.

42 Lamb, S., Dwyer, P. and Wyn, J., *Non-completion of School in Australia: The Changing Patterns of Participation and Outcomes*, LSAY Research Report No. 16, ACER, September 2000, pp. 21-23.

- 2.40 If proportionately more low-achieving boys than low-achieving girls are early school leavers then other factors must be present to account for the better average performance of girls. In other words, if the retention rate of low achieving boys were higher, the differentials in Year 12 achievement between boys and girls would probably be greater.

Literacy demands of the senior curriculum

- 2.41 There is general agreement that the senior curriculum has become more language intensive, with the assessment of courses such as physics, chemistry and even mathematics requiring greater application of literacy skills than it did 20 years ago. There is also general acknowledgment that this has come about as education authorities attempted to remove barriers to girls' participation in these subjects. Frustration was expressed by some students and teachers at the imbalance in assessment methods.

One of the things I have noticed is that...the senior curriculum...is very language intense. In South Australia...the physics exam and the structure of the physics course was changed to make it more appropriate for girls. This meant an extended response question was put in, the multiple choice questions were taken out; more problem solving, more literacy type skills required in the physics exam. We have seen this shift now. The girls are achieving better but the boys are dropping, because they are actually having to write extended writing in physics and chemistry.⁴³

As for specialist maths or four-unit mathematics at year 12, a content analysis has demonstrated that on average the level of the nomenclature and sophisticated verbal reasoning skills that are required—to even understand what the problem is—is on average four times greater than what is required in Australian history and English literature. So not only does the student have to understand what is being asked, they must translate it then into a mathematical algorithm and justify or explicate the solution.⁴⁴

- 2.42 These observations on the increasing literacy demands of the senior curriculum and assessment were not contested by any of the education agencies which gave written or oral evidence. Given the existence of the measurable literacy gap between boys and girls in the early years, and the

43 Mrs Bronte Nicholls, Association of Independent Schools of South Australia, *Transcript of Evidence*, p. 842, and see Mrs Sylvia Walton, Principal, Tintern Schools, *Transcript of Evidence*, p. 230.

44 Dr Kenneth Rowe, Principal Research Fellow, ACER, *Transcript of Evidence*, p. 117.

relative reluctance among boys to read and develop their literacy skills, it is likely that the different literacy demands of the senior curricula have been a factor in boys' declining relative performance.

- 2.43 The broader social composition of secondary students, which now includes a higher proportion of students from non-English speaking and lower socio-economic backgrounds, may have increased the proportion of students in senior secondary school who struggle with the literacy demands of the senior curriculum.

The boys at this school...often come from non-English speaking backgrounds. What I have noticed here is that the boys have a lot of trouble trying to bring life into their reading. I think that is because they are not running the movie in their head. They can do the literal work very easily... What they do not seem to grasp—and that is right up to year 12—is the inferential work. They literally will be given five or six facts, and they cannot then say, 'From all of this information, this is what I see.' They do not pick up the nuance of the language, the colour of it and its various emotive qualities...The whole aim of everything we do—role plays, other small drama pieces, empathy exercises, even visuals such as drawings on the board—is to let them see that this phrase represents this set of emotions... If we do not show them, they will not see it. You literally have to stand up there and perform for them so that they can pick up that type of thing. That is a huge gap in their experience of literacy.⁴⁵

- 2.44 It is important that curriculum and assessment methods are related to the world outside school so that school prepares young people to be able to find, assimilate and process knowledge in the ways that they will be expected to do so outside school. It is important that students can understand and communicate the implications of their work rather than simply perform calculations and solve problems, albeit very complex ones. However, assessment procedures for maths and sciences must, as a first requirement, provide information about students' knowledge, skills and achievement in the subject, and not be a de facto examination of students' English comprehension and expression.

45 Ms Deborah Rees, Classroom Teacher, James Cook Boys Technology High School, *Transcript of Evidence*, p. 717-8.

Gendered patterns of subject choice

- 2.45 Boys and girls exercise quite different patterns of subject choice in the high school curriculum. The sub-groups of boys and girls enrolled in any particular subject at the same level are usually not numerically balanced and will not necessarily have comparable levels of ability, interest and motivation. Consequently, it should not be a surprise that aggregate measures — such as the NSW Higher School Certificate and Victorian Certificate of Education scores — reveal different levels of performance for boys and girls when these results are compared by gender.
- 2.46 Gender equity strategies intended to break down barriers to girls' access to, and performance in, high status and traditionally male areas of study have been in place for over two decades. In more recent years there has been a significant broadening of the senior school curriculum to meet the challenges of rising retention rates and a rapidly changing labour market. Despite these efforts, there remain stark differences in the way that boys and girls access the curriculum.

Enrolment patterns in popular Key Learning Areas

- 2.47 There are a number of Year 12 subject areas which are popular with both boys and girls studying at the tertiary entrance level. Most students of both sexes take subjects in four of the eight Key Learning Areas (KLAs).
- Over 90 per cent of both sexes take English...; around 80 per cent of both take at least one mathematics subject; around 90 per cent of both take at least one subject in the Society and Environment KLA; and about two thirds of both take at least one science subject.⁴⁶
- 2.48 Table 2.1 (*below*) disaggregates subject participation data by gender to reveal some distinctly different patterns of participation even within the four KLAs⁴⁷ that most boys and girls study. Care needs to be taken in comparing the numbers and proportions of boys and girls studying subjects because of the different male and female Year 12 retention rates. While 93 per cent of boys and 100 per cent of girls studied English in 1997⁴⁸ this amounted to a numerical difference of over 15,000 students.

46 Collins, C., Kenway, J., and McLeod, J., *Factors Influencing the Educational Performance of Males and Females in School and their Initial Destinations after Leaving School*, July 2000, p. 37. The national data presented in this report have been used in the discussion for simplicity and consistency. A range of studies and the State and Territory Government submissions to the inquiry confirm these enrolment patterns.

47 The four most popular KLAs are English, Mathematics, Science and Society and Environment.

48 English is not a compulsory subject in every State and Territory.

About the same number of boys (79,500) and girls (77,300) studied mathematics but they represented 85 per cent and 79 per cent of all male and female students, respectively. Eighty five per cent of boys and 94 per cent of girls studied subjects in the Society and Environment KLA, a numerical difference of about 25,000 students. The percentage enrolments of boys and girls were comparable in the science KLA at 66 per cent and 67 per cent, respectively, but nearly 7,000 more girls than boys studied in that key learning area.

- 2.49 More significant differences between boys' and girls' enrolment patterns become apparent when data on enrolments within the four most popular KLAs are examined. Fifty nine per cent of all boys who studied science in 1997 studied a physical science while only 35 per cent of girls who studied science did so —about 14,000 more boys. About 21,000 more girls than boys studied biological and other (non-physical) sciences. Other major gender differences become apparent within the four most popular KLAs when the level of study is taken into account. These will be considered later in this chapter.

Table 2.2 Participation by 1997 Y12 students in tertiary accredited subjects by Key Learning Area

Key Learning Area	Males		Females	
	Subject enrolments	%	Subject enrolments	%
English	76,388	93	91,885	100
Mathematics	79,596	85	77,307	79
Society and Environment	85,666	85	110,628	94
Science	71,793	67	78,430	66
<i>Physical sciences</i>	42,077	59**	27,655	35**
<i>Biological and other sciences</i>	29,716	41**	50,775	65**
Arts	22,834	23	38,557	34
Languages other than English	8,257	10	16,524	18
Technology	43,004	49	28,625	36
<i>Computer studies</i>	21,960	51**	13,387	47**
<i>Home science</i>	1,156	3**	5,936	21**
<i>Technical studies</i>	17,031	40**	7,628	27**
<i>Agriculture</i>	2,857	7**	1,674	6**
Health and Physical Education	17,946	22	20,597	24

** Denotes the number of boys or girls doing that subject as a percentage of boys or girls studying in that Key Learning Area. Other figures are the percentage of Year 12 students studying at least one subject in that Key Learning Area

Source Based on Table 2.3 in Collins, C., Kenway, J. and McLeod, J., *Factors Influencing the Educational Performance of Males and Females in School and their Initial Destinations after Leaving School, July 2000*, p. 37.

Enrolment patterns in other Key Learning Areas

2.50 The gender differences are greater outside the four most popular KLAs (Table 2.1). In 1997 twice as many girls as boys studied a Language other than English — over 8,000 more girls than boys — and three girls studied Arts subjects for every two boys — nearly 16,000 more girls than boys. The Technology KLA was and still is more attractive to boys than girls. Overall, 49 per cent of boys compared to 36 per cent of girls selected a subject in this KLA — over 14,000 more boys than girls. Fifty one per cent of the boys who studied a technology subject enrolled in Computer Studies compared to only 36 per cent of girls who studied a technology subject — 8,500 more boys than girls. Again, within the Technology KLA, over 9,000 more boys than girls enrolled in Technical Studies.

Enrolment patterns at different levels of study in popular Key Learning Areas

2.51 A detailed study of gendered participation and outcomes in senior secondary schooling by Teese et al., *Who wins at school*, confirmed that boys and girls were unevenly distributed across the various levels of English, mathematics and science subjects and that there were similar gender disparities in participation and the distribution of ability in other subject areas.⁴⁹ While the study was based on data from the late 1980s and early 1990s and was published in 1995, its identification and analysis of enrolment patterns is still relevant today as the enrolment patterns are substantially unchanged.⁵⁰

English

2.52 Senior high school English has diversified over recent decades and may now be studied at a range of different levels in some states. Teese found that where English is not compulsory, boys were less likely than girls to enrol and a lower proportion of boys than girls attempted the higher levels of English study.⁵¹ Despite the fact that more girls than boys study English and that the girls are more broadly representative of their cohort than boys, girls still outperform boys in this subject.

Since more academically oriented girls take 2-unit and 3-unit English [in NSW], those enrolling in English (General) include a

49 Teese, R., Davies, M., Charlton, M., Polesel, J., *Who wins at school: Boys and girls in Australian secondary education*, University of Melbourne, 1995.

50 Collins, C., Kenway, J., and McLeod, J., *Factors Influencing the Educational Performance of Males and Females in School and their Initial Destinations after Leaving School*, July 2000, p. 40.

51 Teese, R., Davies, M., Charlton, M., Polesel, J., *Who wins at school: Boys and girls in Australian secondary education*, University of Melbourne, 1995, pp. 45-49.

higher proportion of average and below-average students. Yet despite this, girls' performance in this subject deviates sharply from that of boys. As many as 27% of boys were located in the lowest band of performance compared to only about 14% of girls.⁵²

English is the major subject area where average female and male outcomes at the HSC diverge. Males are twice as likely as females to be in the bottom quartile of English achievement in the HSC and almost half as likely to be in the top quartile.⁵³

- 2.53 *Who wins at school* concluded that boys are “decidedly disadvantaged in English”. The significance of this disadvantage lies in the centrality of English as a cultural transmitter and as a means for developing communication and inter-personal skills.⁵⁴ These skills are more highly valued by the labour market than they were and this issue is examined later in this report. Success in English supports other learning and may be more necessary as the language complexity of other subjects increases.

Mathematics

- 2.54 The mathematics KLA, and higher level maths courses in particular, enrol disproportionate numbers of boys. Boys' results tend to be distributed towards the upper and lower ranges with a 'hollowing out' in the middle. This reflects the tendency of large numbers of boys to select mathematics at this level regardless of their strength in this subject area. Girls' results tend to be more evenly distributed and they experience lower rates of failure.⁵⁵
- 2.55 Analysis of NSW results revealed that proportionally fewer but more able girls enrolled in higher level mathematics. The effect of this was that a small group of able girls were competing with a larger and more representative group of boys in the hardest mathematics subjects and they tended to do better except at the very highest level. At the intermediate 2-unit level [NSW] girls' results were skewed towards good results while boys' results were skewed towards poor results, implying that, compared to boys, a smaller proportion of abler girls added the more difficult 3-unit maths to their program. By excluding themselves from higher level maths, abler girls enhanced the overall results of girls at the 2-unit level and

52 Teese, R., Davies, M., Charlton, M., Polesel, J., *Who wins at school: Boys and girls in Australian secondary education*, University of Melbourne, 1995, p. 49.

53 NSW Department of Education and Training, *Submission No. 164*, p 13.

54 Teese, R., Davies, M., Charlton, M., Polesel, J., *Who wins at school: Boys and girls in Australian secondary education*, University of Melbourne, 1995, pp. 46 & 72.

55 Teese, R., Davies, M., Charlton, M., Polesel, J., *Who wins at school: Boys and girls in Australian secondary education*, University of Melbourne, 1995, p. 52.

ensured that girls are disproportionately represented in the upper bands of performance.⁵⁶

Boys move more freely into the higher levels of the mathematics program. Girls are more restrained. Their rewards for achievement are given at lower levels of the program than their ability range would justify...They are more often confined, in effect, to levels of the mathematics program which do not do justice to their abilities.⁵⁷

- 2.56 More recent ACER data from 1998 confirms that these gender patterns persist in mathematics enrolments and therefore the *Who wins at school* conclusions based on earlier data are still pertinent.

...the Victorian data indicate that the grouping together of all Mathematics units masks much larger differences in participation rates. In these data, males make up 78 per cent of the enrolments in specialist mathematics, whereas they constitute 67 per cent of enrolments in mathematics methods and 63 per cent of enrolments in fundamental mathematics (general or further mathematics).⁵⁸

Sciences

- 2.57 The divergent patterns of boys' and girls' enrolments in the sciences is discussed above in relation to the data in Table 2.1. Teese made the following observations on boys' and girls' relative participation and performance.

Chemistry is a subject in which the performance benefits which should accompany lower relative participation...are not delivered [for girls]. This does not mean girls are not good at chemistry. Rather the factors which tend to discourage higher levels of participation in this subject would also appear to inhibit or check higher levels of achievement...

Girls...are less likely [than boys] to do either very well in physics or very badly. Their numbers concentrate in the middle bands of performance. These reverse images are based on very large differences in participation rates...

56 Teese, R., Davies, M., Charlton, M., Polesel, J., *Who wins at school: Boys and girls in Australian secondary education*, University of Melbourne, 1995, p. 54.

57 Teese, R., Davies, M., Charlton, M., Polesel, J., *Who wins at school: Boys and girls in Australian secondary education*, University of Melbourne, 1995, p. 58.

58 Fullarton, S., Ainley, J., *Subject Choice by Students in Year 12 in Australian Secondary Schools*, LSAY Research Report No. 15, ACER, June 2000, p. 13.

Only in the case of biology — a highly ‘feminized’ subject, undertaken by nearly 40% of girls in New South Wales but only 25% of boys — do we see performance indicators working in favour of girls. Girls are much more highly represented than boys in the top bands of performance and much less well represented in the bottom bands. These biology profiles are very nearly the reverse of the chemistry profiles.⁵⁹

Society and Environment

2.58 This Key Learning Area includes the humanities, social sciences, economics and business subjects and occupies the ‘middle order’ of the curriculum after the higher level English, mathematics and physical science subjects.

Because this hierarchical pattern operates on both academic and gender lines, the intermediate and lower orders of the curriculum become the meeting ground of *boys who have been less successful in their school careers* and *girls who are more representative of the whole ability range*.⁶⁰

2.59 The Teese analysis of two subjects, economics and geography, are presented here as examples of gender differences in participation and performance in this KLA.

2.60 Economics, perhaps because it is more vocationally oriented than alternatives in this subject group, attracts more boys than girls. Many of the boys seemed to have chosen economics in refuge from higher level maths and science, and they were competing with a smaller number of girls whose average level of achievement was higher. While the performance profiles of boys and girls in economics were similar in the Teese study, girls were less likely than boys to do poorly and just as likely to do very well.⁶¹

2.61 Geography has broader appeal than economics and is sometimes offered at more than one level. The gender balance of enrolments in geography is relatively even although the Teese study suggests that boys and girls tend to have different reasons for choosing it — girls generally did better than boys but they were more likely to have chosen geography because they

59 Teese, R., Davies, M., Charlton, M., Polesel, J., *Who wins at school: Boys and girls in Australian secondary education*, University of Melbourne, 1995, p. 62.

60 Teese, R., Davies, M., Charlton, M., Polesel, J., *Who wins at school: Boys and girls in Australian secondary education*, University of Melbourne, 1995, p. 62.

61 Teese, R., Davies, M., Charlton, M., Polesel, J., *Who wins at school: Boys and girls in Australian secondary education*, University of Melbourne, 1995, p. 65.

were intrinsically attracted to it. As with economics, many boys had chosen geography in refuge from higher level maths and science. In higher-level geography courses, which enrolled boys and girls who had been similarly motivated by interest and ability, performance profiles did not diverge as much, although girls were more likely to achieve at the highest level.⁶²

Factors driving subject choice

2.62 Boys generally have a much more vocational orientation to schooling and choose their subjects accordingly. Forty three per cent of boys compared with 15 per cent of girls limit themselves to study in the mathematics, science or technology Key Learning Areas. There is a strong tendency for high achieving boys to gravitate to the maths and physical science options while the low achievers tend towards the technology subjects popular with boys.⁶³ Girls are more inclined to select subjects on the basis of their interests and abilities.

Girls who participate in higher level mathematics and physics are the more determined and capable of the girls in the same cohort, while some boys consider they ought to do these subjects by virtue of their gender and/or career aspirations. It may also be that boys feel more social pressure to make mathematics/science choices and consequently [choose] harder options.⁶⁴

2.63 The concentration of boys' subject choice in the maths and physical sciences also has strategic benefits for those experiencing success.

The most popular subjects taken by girls do not provide the same kinds of benefits as the most popular subjects taken by boys — coherence, mutual support, vocational orientation, reliability of personal investment, and institutional prestige. When girls do enter this terrain — as they have done increasingly — it is with more restraint and with less complete success.⁶⁵

2.64 An ACER study identified that there is a strong correlation between social advantage — as measured by socio-economic status and parental

62 Teese, R., Davies, M., Charlton, M., Polesel, J., *Who wins at school: Boys and girls in Australian secondary education*, University of Melbourne, 1995, pp. 65-72.

63 Collins, C., Kenway, J., and McLeod, J., *Factors Influencing the Educational Performance of Males and Females in School and their Initial Destinations after Leaving School*, July 2000, p. 39.

64 Northern Territory Department of Education, *Submission No. 162*, p. 7.

65 Teese, R., Davies, M., Charlton, M., Polesel, J., *Who wins at school: Boys and girls in Australian secondary education*, University of Melbourne, 1995, p. 108.

education — and participation in the physical sciences, higher level mathematics and foreign languages. The economics and business subjects and the technology group of subjects tend to be selected by students from lower socio-economic backgrounds.⁶⁶ The gender differences in subject selection and performance are less severe for boys and girls in higher socio-economic groups.

The relative disadvantages experienced by boys and girls in the curriculum are not experienced equally by all groups of girls and boys. Social analysis shows that the higher up the scale of socio-economic status, the more the disadvantages by girls in maths and sciences decline and the more the disadvantages faced by boys in English also decline. Gender relativities...are weakest where individuals enjoy the greatest cultural and material advantages, though they are by no means absent, even here.⁶⁷

Conclusions about subject choice

- 2.65 This report has devoted significant space to subject choice and performance as evidence of the underlying complexities of the issue of boys' and girls' relative academic performance. The essential point is that aggregate measures of relative performance at Year 12 cannot alone be relied upon as measures of relative advantage or disadvantage.
- 2.66 The trends in the average Year 12 performance of boys and girls may be symptomatic of other underlying problems and warrant investigation. Aggregate data on gender performance must be carefully considered in the light of information on relative male and female school and subject participation rates and a clear understanding of what motivates boys and girls to select particular subjects. It has been clearly demonstrated that even numerically matched enrolments of boys and girls in a popular subject area are unlikely to be an even match in terms of their interest, motivation and ability. A flaw in the public debate about boys' academic achievement is that comparisons are drawn between boys and girls as if they were evenly matched cohorts at each level of each subject. Clearly they are not and we should be very cautious about formulating policy on the assumption that they are.
- 2.67 One of the problems in analysing the effects of patterns of subject choice is establishing the 'optimal' pattern. The discussion usually revolves around

66 Fullarton, S., Ainley, J., *Subject Choice by Students in Year 12 in Australian Secondary Schools*, LSAY Research Report No. 15, ACER, June 2000, pp. 14 & 17.

67 Teese, R., Davies, M., Charlton, M., Polesel, J., *Who wins at school: Boys and girls in Australian secondary education*, University of Melbourne, 1995, p. 109.

boys' or girls' under or over-enrolment in certain subjects. By implication this is in comparison to participation rates of the opposite sex, although these may not be 'optimal' either.

- 2.68 The exhaustive analysis of the *Who wins at school* study indicates that while more girls than boys complete school, girls as a group have a lower rate of participation in higher level maths and physical science subjects. Strategies to encourage girls to attempt academic challenges commensurate with their abilities are still required and new strategies need to be devised to unlock the potential of girls who under-achieve at school as a result of social or other factors.
- 2.69 In comparison to girls a much higher proportion of boys participate in higher level maths and physical science subjects even when success is unlikely. Boy's lower rates of participation and success in English and the humanities arguably limit their development of better communication and interpersonal skills and a wider understanding of the world around them. Arguably this also affects their attitudes to life and social issues.
- 2.70 The labour market has changed dramatically over recent decades towards placing increasing value on the skills developed in subjects where boys' participation rates are lower. (See Chapter 3 for a detailed discussion of labour market change.) Successful strategies to encourage boys to study a wider range of subjects might exploit boys' vocational orientation towards education by alerting them to the increasing importance the labour market now places on communication and interpersonal skills. As with girls, particular strategies need to be devised to unlock the potential of boys who under-achieve at school.

Indigenous boys

- 2.71 The Committee has not undertaken a separate investigation into the issues surrounding the educational under-achievement of indigenous boys. However, it has received sufficient evidence to indicate that most of the issues affecting boys' education generally also apply to indigenous boys, although they clearly suffer from some additional educational disadvantages.
- 2.72 While most of the published data for indigenous students does not distinguish between boys and girls, it is clear that indigenous boys and girls are the most disadvantaged students in Australia. The available data

suggests that within the indigenous cohort of students, boys are not achieving as well as girls.

- 2.73 For the purpose of its submission to the inquiry, the NSW Department of Education and Training analysed literacy data isolating key variables including Aboriginality and gender. This analysis showed:
- Aboriginality has the greatest effect on achievement when considered on its own, far above that for all students, and within this group, the performance of boys is lower than that for girls indicating that they are more at-risk of lower educational achievement than all other students.⁶⁸
- 2.74 Participation and school retention rates for indigenous students are lower than for non-indigenous students, and indigenous boys are more likely to leave school early than indigenous girls.⁶⁹ South Australian data shows that in that State, indigenous students are more than twice as likely as non-indigenous students to be suspended or excluded from school.⁷⁰
- 2.75 Data published by the Independent Review of Indigenous Education in the Northern Territory (the Collins report) shows that indigenous girls are much more likely than indigenous boys both to complete school and to qualify for entry into the Northern Territory University.⁷¹ However, school completion and university entrance by indigenous girls is still far below numbers commensurate with their proportion of the population.
- 2.76 The Committee believes that most of the issues it has identified relating to the under-achievement of boys, generally, also apply to indigenous boys, sometimes with greater impact. The Collins report supports this assertion although that report also identifies a host of other issues that have been beyond the scope of this inquiry to investigate. In particular, issues identified in this report are relevant to indigenous boys in the following ways:

68 New South Wales Department of Education and Training, *Submission No. 164*, p. 10.

69 Marks, G. N. and Fleming, N., *Early School Leaving in Australia: Findings from the 1995 Year 9 LSAY Cohort*, LSAY Research Report No. 11, ACER, August 1999, p. 19; and see Northern Territory Aboriginal Male Health Reference Committee, *Submission No. 190*, p. 1; and see Collins, B. and Lea, T., *Learning Lessons: An Independent Review of Indigenous Education in the Northern Territory*, Northern Territory Department of Education, 1999, p. 158, for comparisons of indigenous/non-indigenous participation rates in the Northern Territory.

70 South Australian Department of Education, Training and Employment, 'Audit of Suspensions, Exclusions and Expulsions, Term 3, 1999', *Exhibit No. 49*, pp. 3, 5 & 9.

71 Collins, B. and Lea, T., *Learning Lessons: An Independent Review of Indigenous Education in the Northern Territory*, Northern Territory Department of Education, 1999, p. 31.

- **Tracking the attendance of students moving between primary and secondary schools and between schools:** The Collins report noted the impact of poor school attendance on the outcomes of indigenous students and raised the issue of the mobility of indigenous students as a factor in their under-attendance or non-attendance.⁷² Mobility of indigenous students also negatively affects the establishment of good teacher/student relationships which are central to good teaching.
- **Hearing difficulties:** (*Recommendation 5*) The Collins report noted the prevalence of hearing and other health and nutrition problems in indigenous students and the effect these have on their literacy and other learning outcomes.⁷³ The Committee's recommendation relating to hearing and auditory processing difficulties could have significant benefits for many indigenous students, boys and girls.
- **Pre-literacy and pre-numeracy skills development:** (*Recommendation 6*) Community-based programs to raise parental awareness of activities that will enhance the development of pre-literacy and pre-numeracy skills may be beneficial. These might be effectively supported through mobile and community pre-schools and health services.⁷⁴
- **Researched-based explicit literacy instruction:** (*Recommendations 7 to 12*) The Collins report noted the need for explicit pedagogy and also noted reluctance on the part of some teachers to be strong in their literacy instruction. 'Coupled with the diffidence some teachers feel about teaching Western concepts in the first instance — for fear of contributing to an assimilationist rather than educationist outcome — it is small wonder some teachers are tentative about the role and place of literacy instruction for Indigenous students.'⁷⁵

2.77 The lack of positive male role models is an issue that is more acute in indigenous communities and the impact seems to be more negative on indigenous boys than it is for non-indigenous boys. It is also necessary to consider educational provision and achievement in the wider context of the full circumstances indigenous people experience.

72 Collins, B. and Lea, T., *Learning Lessons: An Independent Review of Indigenous Education in the Northern Territory*, Northern Territory Department of Education, 1999, pp. 146-8.

73 Collins, B. and Lea, T., *Learning Lessons: An Independent Review of Indigenous Education in the Northern Territory*, Northern Territory Department of Education, 1999, pp. 120, & 150-153.

74 Collins, B. and Lea, T., *Learning Lessons: An Independent Review of Indigenous Education in the Northern Territory*, Northern Territory Department of Education, 1999, pp. 96-99.

75 Collins, B. and Lea, T., *Learning Lessons: An Independent Review of Indigenous Education in the Northern Territory*, Northern Territory Department of Education, 1999, pp. 131-133.

We cannot take the discussion away from the circumstances in which indigenous people in contemporary Australia find themselves—the disadvantage and poverty facing many indigenous families. For indigenous boys, some of those things are a whole life experience; it is not just geared to what happens in education. We need to look in a holistic way at what happens to young men and boys in indigenous communities. There is a lack of role models for a lot of indigenous boys—in their own homes, in the workplace and in service delivery areas. A lot of that is to do with what happens to young men as they get older: indigenous young men are being caught up in juvenile justice in our jails and detention centres a lot more than young indigenous women are.⁷⁶

One thing that we need to take into consideration in the education of males in the community is the usurping of the male role as part of the colonisation process... Most of the things that are happening now have been taken over by women in the community. That is not to say that is a wrong thing. It is just that, because our blokes have been so marginalised in terms of health and education in particular, the women have sat up and said, 'If you blokes are not going to do it, we will do it,' and away they go. The women's liberation movement and that sort of thing have helped with that process, so we have become further and further marginalised. It has got to the point that if we are talking about male health and male education issues... we have females representing males on all the different forums. That makes it really hard as well for our males to grab the bull by the horns and say, 'This is the way we are going, because I have there a bloke that is showing me the way.'⁷⁷

- 2.78 The issues of health and the roles of indigenous men in the community also affect the way that indigenous boys perceive the value and relevance of education. The tendency, at least in the Northern Territory, for the indigenous workers in health, education and local government to be mostly women also may lead indigenous boys to infer that rewards such as employment do not necessarily flow from education.⁷⁸

76 Ms Carmelita Dunn, General Manager Indigenous Education Division, Northern Territory Department of Employment, Education and Training, *Transcript of Evidence*, p. 1252.

77 Mr John Christophersen, Interim Chairman, Northern Territory Indigenous Male Health Reference Group, *Transcript of Evidence*, p. 1267.

78 Mr Ken Davies, Acting General Manager School Services, Northern Territory Department of Employment, Education and Training, and Ms Carmelita Dunn, General Manager Indigenous Education Division, Northern Territory Department of Employment, Education and Training, *Transcript of Evidence*, p. 1264.

The 3Rs are part of the education process that relate to employment prospects at the end. If you are talking about a system where you do not have to worry about employment prospects, do you need to be able to read, write and add up? If you want to leave school, go to university, get a job and earn X amount of dollars a year, you need your 3Rs. But if, at the end of the day, you are not going to have a job or some menial work, CDEP or whatever it might be, why do you need to have the 3Rs?⁷⁹

There are other things apart from the social context of indigenous people. In most remote communities in the Northern Territory a lot of indigenous people say, 'Education for what?' There is a limited labour market in remote communities. The prospect facing many indigenous young people coming out of our system is CDEP, which is the equivalent of Working for the Dole. I think that is an issue as well.⁸⁰

- 2.79 Schooling in remote communities often involves second language learning because Standard Australian English is not the language of everyday speech either at home or play. This complicates the development of English language and literacy for many students and is compounded for some students by poor hearing and erratic school attendance.⁸¹
- 2.80 The solutions to these difficulties for indigenous students are not obvious and will involve a more integrated approach to the delivery of health, education, employment and other community services, especially in remote areas. Successful approaches must involve the local community in the planning and implementation. The importance of local involvement is evident in the examples of successful practice in remote communities given in the Collins report and in a range of examples provided in Education Queensland's submission to the inquiry.
- 2.81 The Committee has not made recommendations to address issues specific to indigenous boys although it believes that many of its recommendations will benefit indigenous boys and girls along with all students. More detailed work on the specific needs of indigenous students has been done by others. These reports include *What works? Explorations in improving*

79 Mr John Christophersen, Interim Chairman, Northern Territory Indigenous Male Health Reference Group, *Transcript of Evidence*, p. 1270.

80 Ms Carmelita Dunn, General Manager Indigenous Education Division, Northern Territory Department of Employment, Education and Training, *Transcript of Evidence*, p. 1264.

81 Collins, B. and Lea, T., *Learning Lessons: An Independent Review of Indigenous Education in the Northern Territory*, Northern Territory Department of Education, 1999, pp. 127-129.

*outcomes for Indigenous students*⁸² and the Collins report. The Committee urges all education authorities, including the non-government organisations with responsibility for educating indigenous students, to review these reports for information on aspects of policy and practice relevant to their responsibilities.

Post-school outcomes

Social outcomes

- 2.82 A number of submissions argued that the current attention to education and employment outcomes in framing gender equity policy is too narrow because it ignores a range of other gender imbalances.

...our society sees the delinquency rate among males as a normal and natural state of affairs. Why do boys suicide at a rate five times above what is 'normal' for girls? How is it that we so readily accept a subculture of violence and alcohol abuse with boys and men as a part of their manliness?⁸³

While men and women had similar overall [rates of mental illness] there were differences by type of mental disorder. Women were more likely than men to have experienced anxiety disorders (12% compared with 7.1%) and affective disorders (7.4% compared with 4.2%). On the other hand, men were more than twice as likely as women to have substance use disorders (11% compared with 4.5%)...The prevalence of affective (mood) disorders was highest at 11% for women aged 18–24 years, more than three times the rate for men of this age.⁸⁴

- 2.83 It follows that a range of other social measures also ought to be used to indicate how effectively families, society and education meet the needs of both boys and girls.⁸⁵ The additional indicators suggested included rates of depression and mental illness, attempted and completed suicide, self-

82 McRae, D., Aisworth, G., Cumming, J., Hughes, P., Mackay, T., Price, K., Rowland, M., Warhurst, J., Woods, D., and Zbar, V., *What works? Explorations in improving outcomes for Indigenous students*, March, 2000.

83 Mr John Fleming, *Submission No. 75*, p. 5.

84 *Mental Health and Well Being: Profile of Adults, Australia*, ABS, 4326.0, 1997, p. 6.

85 *see, for example*, Australian Council of State School Organisations, *Submission No. 119*, pp. 8, 12–13; Mr John Fleming, *Submission No. 75*, pp. 5–6; and Mr Richard Fletcher, *Submission No. 166*, p. 14.

harm, drug and alcohol abuse, motor vehicle deaths and injuries, juvenile crime and detention, violent crime and adult rates of imprisonment. The Committee does not intend to imply that these negative outcomes are necessarily attributable to education.

- 2.84 On many of these types of measures men are not doing well. In 1998, over 80 per cent of the 737 opiate overdose deaths were of males and many more male than female users of heroin and cannabis were frequent (once a week or more) or daily users. Among secondary students 12 to 17 years of age in 1996, more young males than females are likely to have recently used illicit drugs or engaged in binge drinking. In 1999-2000, 274 males, or nearly five and one half times as many males as females, committed homicide and males were one and one half times more likely than females to be homicide victims.⁸⁶ In 1998, 2,150 males, or four times as many males as females, committed suicide.⁸⁷ In 2000, 1,300 males, or two and one half times as many males as females, were killed on the roads.⁸⁸
- 2.85 In 2000, 604 males, or nine times as many males as females, were held in juvenile correction institutions. This is consistent with the sex distribution of adult prisoners. Ninety four per cent of adult prisoners are male and two-thirds of prisoners are under 35 years of age. Therefore, about 13,500 adult males under 35 years were in custody on 30 June 2000.⁸⁹
- 2.86 For males, evidence linking low educational attainment, unemployment, drug and alcohol abuse and imprisonment is clear. In NSW prisons in the early 1990s only six per cent of prisoners had completed secondary schooling while three per cent had received little or no schooling. Of the prison population at that time 74 per cent had a problem with drug or alcohol abuse and, at the time of their arrest, 72 per cent of prisoners were not employed. About two per cent of prisoners had a significant intellectual disability and a further 11 per cent were at the margin of being classified with an intellectual disability. Around 15 per cent of all prisoners were enrolled in basic literacy courses.⁹⁰

86 Australian Institute of Criminology, see <http://www.aic.gov.au/research/drugs/stats>; <http://www.aic.gov.au/research/hmonitor/stats>.

87 Australian Institute of Health and Welfare, *Australian Injury Prevention Bulletin*, Issue 23, 2000, see, <http://www.nisu.flinders.edu.au/pubs/bulletin23/bulletin23-4.html>.

88 Australian Transport Safety Bureau, *Road Fatalities Australia: 2000 Statistical Summary*, August 2001, pp. 6-8.

89 Australian Institute of Criminology, see <http://www.aic.gov.au/stats/juveniles/2000> and <http://www.aic.gov.au/publications/facts/2001/sec6.html>.

90 Grant, D. *Prisons: The Continuing Crisis in NSW*, Sydney, 1992, p. 8; 49 per cent of prisoners had a drug problem, 18 per cent had an alcohol problem and seven per cent had both a drug and alcohol problem; 59 per cent of prisoners were unemployed while a further 13 per cent were

- 2.87 The connections between low levels of education attainment and substance abuse and imprisonment were not included in the current *Gender Equity Framework*. These deficiencies are not taken up in the report *Factors Influencing the Participation of Males and Females in School and their Initial Destinations After Leaving School* which was commissioned to further inform gender equity policy making.
- 2.88 It is naive to believe that education alone can successfully address all of society's social problems and it would be unreasonable to load such an expectation onto teachers and schools. However, the links between poor educational attainment and negative social outcomes do justify the inclusion of social indicators as relevant indicators of the effectiveness of educational policies and strategies.

Labour market outcomes

- 2.89 There are major gender differences in the post-school labour market outcomes for young people. Employment for young men and women tends to be concentrated in different industries and occupations although both young men and young women, and teenagers in particular, are heavily reliant on employment in the retail industry. Teenage males enjoy a marked advantage over teenage females in access to permanent full-time employment largely through the opportunities provided by apprenticeships in the traditional trades and the access males have to unskilled labouring jobs. Long term trends in the youth labour market which have a bearing on the boys' education issue are considered in Chapter 3.
- 2.90 Table 2.3 (*below*) details some of the differences in the employment outcomes for men and women 20 - 24 years of age. In particular:
- young men are more likely to be employed;
 - young men are more likely to be unemployed⁹¹;
 - young women are more likely to be studying, whether or not they are in the labour force;
 - young women are much more likely to be working part-time; and

on permanent pensions, and see Senate Employment, Education and Training References Committee, *Report of the inquiry into Education and Training in Correctional Facilities*, April 1996, p. 86, 13.5 per cent of NSW prisoners in 1993/94 were unable to read and write.

⁹¹ Differences in the labour force participation rates of males and females make it possible for men simultaneously to be more likely to be employed and more likely to be unemployed.

- young women are much more likely to be not studying and not in the labour force.

Table 2.3: Labour Market Characteristics of People 20-24 years of age by sex, August 1998

	Males	Females	Persons
% age of the population in the labour force	86	75.9	81
% age of the population employed	75	67.6	71.3
% age of the population studying and not in labour force	8.5	9.7	9.1
% age of the population not studying and not in labour Force	5.4	14.4	9.8
% age of the population studying	17.4	21.4	19.3
% age of the population combining work and study	7.4	10.5	8.9
% age of the population unemployed	11	8.3	9.6
part-time employment as a % age of full-time employment	20.1	34.5	26.9

Source From ABS Labour Force, Australia, Cat No. 6203.0, see Wooden, M. and VandenHuevel, A in *Australia's Young Adults: The Deepening Divide*, Dusseldorp Skills Forum, 1999, p. 39.

- 2.91 These differing patterns of participation in employment and education reflect differences in the opportunities which young men and women have available to them when they leave school. The labour market does not present young men and women with an identical set of opportunities and, on average, young men earn significantly more than young women.⁹²
- 2.92 An ACER report found that, at 19 years of age, males in full-time employment with very low levels of literacy achievement (as measured at age 14) earn, on average, more than females at 19 years of age in full-time employment with very high levels of literacy achievement.⁹³ This group of teenage males also earned more than all but the very highest achieving males the same age.
- 2.93 A number of submissions from teachers' unions suggested that this calls into question the significance of the boys and literacy issue.⁹⁴ It is disturbing that organisations so closely connected to education could take this position and ignore the remaining evidence in the same ACER report

92 Landt, et al, 1998 and ABS, *Australia's Young Adults: The Deepening Divide*, Dusseldorp Skills Forum, 1999, p. 89.

93 Lamb, S., *School Achievement and Initial Education and Labour Market Outcomes*, LSAY Research Report No. 4, ACER, July 1997, pp. 33-37.

94 Australian Education Union, *Submission No. 150*, p. 26, and see Queensland Teachers' Union, *Submission No. 160*, p. 7; NSW Teachers' Federation, *Submission No. 148*, p. 13.

which showed that both males and females with low and very low achievement in literacy and numeracy were more likely to be unemployed, and to be unemployed for longer periods, than higher achievers.⁹⁵ It also ignores the questions of career paths, future prospects and long term earning patterns.

- 2.94 The transition from school to work is difficult for many young people and teenage females and young women are less likely to successfully negotiate a path to full-time employment than males in the same age groups. However, the objective of public education must be to enable all students, irrespective of their sex or other background factors, to achieve their full potential. While the labour market disadvantage of women exists and warrants its own policy responses it can never be a justification for down-playing the educational needs of any individual or group.

Tertiary education

- 2.95 The proportion of enrolments in post-secondary study leading to a recognised qualification is split evenly between males and females at 49.2 per cent and 50.8 per cent, respectively.⁹⁶ However, patterns of participation in tertiary education by young men differ markedly from those of young women. As with employment data and measures of educational attainment, the aggregate data conceal as much as they reveal about the relative positions of men and women.

Higher education (university)

- 2.96 During the 1980s the university participation rates for men and women at 19 years of age were approximately the same but by the mid 1990s the university participation rate for women was eight percentage points higher than for men. For the group that entered university in 1999, the participation rate for women at 19 years of age was 9 percentage points higher than for men. For all age groups, in 1999 women accounted for 55.6 per cent of all higher education commencements and 54.9 per cent of total enrolments.⁹⁷

95 Lamb, S., *School Achievement and Initial Education and Labour Market Outcomes*, LSAY Research Report No. 4, ACER, July 1997, p. 19.

96 ABS Education and Work, Cat No. 6227.0, p. 9.

97 DETYA, *Submission No. 150*, p. 17, and see Marks, G. N., Fleming, N., Long, M., and McMillan, J., *Patterns of Participation in Year 12 and Higher Education in Australia: Trends and Issues*, LSAY Research Report No. 17, ACER, December 2000, p. 15.

2.97 However, women's apparent advantage in the university participation rate is explained by their dominance of the enrolments in arts, nursing⁹⁸ and education courses which do not necessarily provide access to the higher income streams available on completion of other professional education and training. The aggregate measure also conceals women's low participation rates in engineering courses (9 per cent), information technology (24.5 per cent) and architecture and building (33.4 per cent) at the Bachelor degree level.⁹⁹ In May 2001, over 56 per cent of students undertaking higher degrees were male.¹⁰⁰

Vocational education and training (VET)

2.98 In May 2001, male and female enrolments in VET courses¹⁰¹ were roughly even at 51.5 per cent and 48.5 per cent, respectively¹⁰². However, the aggregate enrolment data conceal widely divergent patterns of participation which owe much to the better access to the employment-based training opportunities in the traditional trades that young men continue to enjoy.

2.99 In May 2001, males accounted for 66.4 per cent of enrolments at, or immediately below, trade level (Certificate III and IV) whereas women accounted for over 58 per cent of enrolments in basic vocational courses (Certificate I and II). Women accounted for 54.5 per cent of enrolments in Advanced diploma and diploma level courses.¹⁰³

2.100 In 1997 males accounted for 85.2 per cent of commencements in employment-based training and this share equated to 93.4 per cent of commencements if female apprenticeship commencements in hairdressing were excluded. By 1999, males accounted for a much lower 60 per cent of New Apprenticeship commencements¹⁰⁴ but this is mainly because New

98 The transfer of nursing education from hospitals to universities during the 1980s eliminated a major source of employment-based training opportunities that were mostly accessed by women. In 1978, about 26,500 nursing students were in basic training in Australian hospitals, most were women. *see The Report of the Committee of Inquiry into Nurse Education and Training to the Tertiary Education Commission*, August 1978.

99 ABS Education and Work, Cat No. 6227.0, pp. 12-13; *and see* Australian Secondary Principals' Association, *Submission No. 81*, p. 10.

100 ABS Education and Work, Cat No. 6227.0, p. 9.

101 VET courses include employment-based training course such as apprenticeships and traineeships in addition to vocational courses, such as accounting courses, which are not attached to employment.

102 ABS Education and Work, Cat No. 6227.0, p. 9.

103 ABS Education and Work, Cat No. 6227.0, p. 9.

104 DETYA, *Submission No. 117*, p. 52.

Apprenticeships are also available in a broader range of employment occupations with higher rates of female participation. In May 2001, about 85 per cent of teenage employees in skilled trades were male.¹⁰⁵

Implications

- 2.101 Despite rising school retention rates and changing curricula, the educational needs of many boys have been overlooked and are not being met. The assumption over recent decades appears to have been that girls have urgent needs to be addressed and that the boys will be all right but the evidence indicates that the latter is not so.
- 2.102 However, an examination of the issues behind the broad measures of social, economic and educational outcomes reveals that under-achievement and disadvantage closely follow patterns based on gender. Despite major changes to social attitudes about the role and status of women, and two decades of educational policies targeting the needs of girls, many long-standing patterns of employment disadvantage for women and educational under-achievement for girls persist, particularly for girls from lower socio-economic backgrounds.
- 2.103 Unfortunately, much of the public debate about the educational under-achievement and disengagement of boys has not gone beyond the simplistic idea that educational authorities should reverse an apparent imbalance in educational provision in favour of girls. Boys' needs are more complex than that implies and, in any event, girls' needs have not been universally met. The way forward for both boys and girls is to identify their joint and separate educational needs and to implement a policy framework and strategies to address those needs.

105 ABS Labour Force, original data *and see* ABS Education and Work, Cat No. 6227.0, pp. 12-13; in May 2001, males comprised over 96 per cent of enrolments at Certificate III or IV level in the Engineering and related technologies field and 100 per cent of enrolments at that level in the Architecture and building field.